

~~WO 2005/005050~~ ~~PCT/EP2004/007480~~

~~CLAIMS: WE CLAIM:~~

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1. ~~(Currently Amended) Centrifuge, in particular, a separator or solid bowl screw type centrifuge, having a centrifugal drum in which a separator disc stack consisting of separator discs is arranged, characterized in that the separator discs (1, 2) are subjected at least in sections to a surface treatment changing the surface energy~~A method of increasing the separation effect of a centrifuge having separator discs in a disc stack, the method step comprising:

providing separator discs having a surface energy; and  
treating at least one surface of the separator discs, the treating being done at least in sections of the separator discs, thereby changing the surface energy of the separator discs.

2. ~~(Currently Amended) Centrifuge~~The method according to Claim 1,  
~~characterized in that~~wherein ~~the separator discs (1, 2) consist of~~discs include ~~a first material having the surface energy which first material, at least in sections, is provided~~treated ~~with at least one coating (9, 10) consisting of~~that includes ~~at least one other material, and which coating (9, 10) changes the surface energy of the separator discs in comparison to the first material.~~

3. (Currently Amended) Centrifuge ~~The method~~ according to Claim 1 ~~or 2~~, characterized in that, wherein the separator discs ~~(1, 2) consist of~~ include a material having a surface energy and into which, at least in sections, another material is diffused, which diffusion changes the surface energy of the separator discs ~~in comparison to the first material~~.

4. (Currently Amended) Centrifuge ~~The method~~ according to Claim 1, ~~2, or 3~~, characterized in that, wherein the treating of the separator discs ~~(1, 2) are~~ includes completely ~~surface treated on~~ treating one or both of the top and/or bottom sides surfaces of the separator discs.

5. (Currently Amended) Centrifuge ~~The method~~ according to ~~one of the preceding claims~~, characterized in that Claim 1, wherein the centrifuge is configured to separate a product into phases, and the ~~surface treatment~~ treating of the separator discs is adapted to the surface energy of the ~~light or heavy phase to~~ phases be separated.

6. (Currently Amended) Centrifuge ~~The method~~ according to ~~one of the preceding claims~~, characterized in that Claim 2, wherein the first material is includes high-grade steel and ~~in that the~~ at least one coating is ceramic.

7. (Currently Amended) Centrifuge ~~The method~~ according to ~~one of the preceding claims~~, characterized in that ~~different zones (9, 10) made of~~ Claim 1, wherein the treating includes different materials are applied as coatings to or diffused into ~~different areas~~ sections of the separating discs ~~(1, 2)~~.

8. (Currently Amended) Centrifuge ~~The method~~ according to ~~one of the preceding claims~~, characterized in that ~~different surface treatments~~ Claim 1, wherein the

treating changing the surface energy ~~are carried out~~ is done to surfaces above and below the separating discs ~~(1, 2)~~.

9. (Currently Amended) Centrifuge The method according to ~~one of the preceding claims, characterized in that different surface treatments are carried out~~ Claim 1, wherein the treating is done to surfaces of the discs radially inside and outside the a separating zone.

10. (Currently Amended) Centrifuge The method according to ~~one of the preceding claims, characterized in that different surface treatments are carried out on~~ Claim 1, wherein the treating is done to the separator discs ~~(1, 2)~~ radially inside and outside a rising duct ~~(5)~~.

11. (Currently Amended) Separator A separator disc for a centrifuge, characterized by ~~at least one surface treatment changing the surface energy at least in sections~~ the separator disc comprising:

at least two surfaces having sections; and

wherein the at least two surfaces include a treatment changing the surface energy of one or more of the sections of the separator discs.

12 (New) A centrifuge, comprising:  
a centrifugal drum for separating a product into phases;  
a separator disc stack in the centrifugal drum, the disc stack including separator discs; and  
the separator discs including a treatment, at least in sections, such that the surface energy of the separator discs is changed.